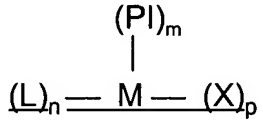
IN THE CLAIMS:

1-9. (cancelled):

10. (currently amended): A catalyst system comprising a transition metal complex of the formula:



wherein M is a transition metal selected from the group consisting of Ti, V, Zr, Hf, Cr, Fe, Co, Ni and Pd.; Pl is a phosphinimine ligand; L is a monoanionic ligand selected from the group consisting of a cyclopentadienyl radical, an indenyl radical, and a fluorenyl radical which radicals are unsubstituted or up to fully substituted by one or more substituents selected from the group consisting of a fluorine atom, a chlorine atom; C_{1-4} alkyl radicals; and a phenyl or benzyl radical which is unsubstituted or substituted by one or more fluorine atoms; X is an activatable ligand selected from the group consisting of a hydrogen atom, a chlorine or fluorine atom, a C_{1-10} hydrocarbyl radical, a C_{1-10} alkoxy radical, a C_{5-10} aryl oxide radical, each of which said hydrocarbyl, alkoxy, and aryl oxide radicals is unsubstituted by or further substituted by one or more substituents selected from the group consisting of a halogen atom, a C_{1-8} alkyl radical, a C_{1-8} alkoxy radical, a C_{6-10} aryl or aryloxy radical, an amido radical which is unsubstituted or substituted by up to two C_{1-8} alkyl radicals, and a phosphido radical which is unsubstituted or substituted by up to two C_{1-8} alkyl radicals; m is 1 or 2; n is 0 or 1; and p is an integer and the sum of m+n+p equals the valence state of M in the presence of an activator comprising a complex aluminum compound of the formula

$R^4_2AlO(R^4AlO)_mAlR^4_2$ wherein each R^4 is independently selected from the group consisting of C_{1-20} hydrocarbyl radicals and m is from 3 to 50 which has been treated with one or more carbohydrates in a weight ratio of aluminum complex to carbohydrate from 1:100 to 100:1 at a temperature from 0°C to 200°C, to provide a molar ratio of treated aluminum to transition metal from 5:1 to 1000:1.

11-16. (cancelled):

17. (currently amended): The catalyst system according to claim [[16]] 10, wherein in the [[aluminum complex]] complex aluminum compound R^4 is selected from the group consisting of C_{1-4} alkyl radicals and m is from 5 to 30.

18. (original): The catalyst system according to claim 17, wherein the carbohydrate is a C_{3-6} monosaccharide.

19. (original): The catalyst system according to claim 17, wherein the carbohydrate is a polysaccharide.

20. (original): The catalyst system according to claim 19, wherein the polysaccharide is a homoglycan polysaccharide.

21. (original): The catalyst system according to claim 20, wherein the homoglycan polysaccharide is unbranched.

22. (original): The catalyst system according to claim 21, wherein the homoglycan polysaccharide is cellulose.

23. (original): The catalyst system according to claim 10, further comprising a support.

24. (original): The catalyst system according to claim 23, wherein the support is silica.

25. (original): The catalyst system according to claim 18, further comprising a support.

26. (original): The catalyst system according to claim 25, wherein the support to silica.

27. (original): The catalyst system according to claim 19, further comprising a support.

28. (original): The catalyst system according to claim 27, wherein the support to silica.

29. (original): The catalyst system according to claim 20, further comprising a support.

30. (original): The catalyst system according to claim 29, wherein the support is silica.

31. (original): The catalyst system according to claim 21, further comprising a support.

32. (original): The catalyst system according to claim 31, wherein the support is silica.

33. (original): The catalyst system according to claim 22, further comprising a support.

34-52. (cancelled):

53. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 10.

54. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 12.

55. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 18.

56. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 19.

57.(withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 24.

58. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 26.

59. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 28.

60. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at

a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 12.

61. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 36.

62. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 37.

63. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 42.

64. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 44.

65. (withdrawn): A process for the polymerization of a mixture comprising from 80 to 100 weight % of ethylene and from 0 to 20 weight % of one or more C_{3-8} alpha olefins at a temperature from 80°C to 250°C in the presence of a catalyst system according to claim 47.